



Sonac Australia Pty Ltd
DEVELOPMENT LICENCE APPLICATION

Application ID: APP002180

EPA Vic.

Request for Further Information

RFI002003 - #2 EPA

April 2022

**The following report details further information as requested by
RFI002003**

**Sonac Australia Pty Ltd
ACN 155 858 601
281 Maryborough - Dunolly Rd, Maryborough, VIC**

<p>Request for additional information in support of SONAC application APP002180/PAS012420 related to Development Licence.</p>	<p>SONAC FURTHER INFORMATION</p>
<p>Odour/Dust</p>	
<p>* Addition of dust and odour monitoring to general monitoring programme for operations</p>	<p>Dust and odour inspection monitoring is included in the general monitoring program that is conducted twice weekly. Results of monitoring is maintained in a database and records available on request. All reports are filed as an environmental record for a prescribed period.</p> <p>There are two site environmental monitoring inspections conducted:</p> <ul style="list-style-type: none"> • Plant Environmental Protection Systems Inspection (PEPSI), inspected by the Environmental Manager & • Weekly Odour, Noise and Dust Check, inspected by Maintenance <p>Refer to Attachment 2 for the inspection forms in use.</p> <p>When an incident is identified the inspector is responsible for reporting to management immediately any issues, non-compliance observations/incidents.</p>
<p>* Consider dust monitoring during construction phase</p>	<p>During construction and commissioning of the expansion project site the inspection frequency will be increased, dependant on the weather and extent of construction/commissioning activity.</p>
<p>* Consider monitoring baghouse to ensure no leaks are occurring (low pressure drop)</p>	<p>The baghouse is inspected by maintenance personnel weekly using the Weekly Odour, Nose and Dust Check sheet. The checks include inspection for leaks, dust release and pressure drop.</p> <p>Refer to Attachment 2 for baghouse monitoring. Records of these checks are kept in the Environmental System.</p>
<p>* Describe programme to ensure trucks observing 10km/hr speed upon unpaved roads to minimise noise</p>	<p>Three 10km speed limit signs are positioned on site:</p> <ul style="list-style-type: none"> - 1. The main entrance, - 2. End of the first corner after the main entrance gates, and - 3. Positioned mid-way on the next straight road. <p>A fourth sign will be placed at the proposed new entrance to the Sonac site.</p> <p>Refer to Attachment 1 for actual locations of speed limit signs.</p>

Wastewater Treatment Plant Upgrade	
* Evidence to show that dewatered sludge is going to be disposed of at 'a lawful place'	The planned Sonac WWTP expansion project will produce dewatered activated sludge cake (K100). All disposal transfers will be managed using the 'Waste Tracker' system. The activated sludge may be sent for composting or generation of biogas.
* Further evidence / detail that treatment plant tanks will have an aeration system / odorous gas collection system installed to prevent odour emissions.	See attachment 3. Design basis for sizing the water scrubber system is calculated passive displacement of air expected within the main tanks. This type of Packed Bed Wet Scrubber removes odours as the contaminated gases pass through the packing media that is wetted with a single pass or recirculating water spray system.
* Further description of CIP system - appropriate reuse and treatment of wastewater.	<p>The WWTP does not receive human sewage or stormwater and only treats wastewater from the blood processing plant and associated operations handling animal blood.</p> <p>Reclaimed permeate water is stored and treated with sodium hypochlorite to achieve free chlorine level between 0.5 – 1.5ppm. Free chlorine levels are measured in the storage tank online by ORP measurement and dosed via automation. The microbiological status of the reclaimed water is tested routinely for E. coli to ensure no viable microorganisms are present and is thus fit for purpose.</p> <p>Reclaimed water used in the CIP system is treated with sodium hydroxide to a concentration of 18-20 mS/cm for cleaning and disinfection of interior surfaces from proteinaceous material build-up.</p> <p>Process equipment identified for CIP includes vessels, process pipes, and separators without disassembly. The cleaning system is typical of food and beverage applications that are cleaned using an automated CIP system. Spent CIP wastewater is returned to the WWTP to be treated.</p>
* Update of wastewater system monitoring programme to cover proposed plant expansion	The wastewater monitoring program will remain the same as the current WWTP with onsite SCADA, remote monitoring systems and IT technical support provided by the equipment and technology provider.
Human Health Risk Assessment	

<p>* Consider all microbial risks during the product manufacture, wastewater treatment and offsite waste disposal</p>	<p>Product manufacture The microbiological status of the finished products is verified through daily sampling (weekly composite) testing for the presence of salmonella. Samples are collected and tested in accordance with AS5008:2007 and the ARA Code of Practice for the Hygienic Rendering of Animal Products. Samples are dispatch to a NATA accredited laboratory and test reports of results maintained.</p> <p>The process is validated annually, or where the process has changed, in accordance with AS5008:2007 and the ARA Code of Practice for the Hygienic Rendering of Animal Products to ensure the destruction of spore forming bacteria. Process validation requires sampling and testing for the presence of and destruction of Clostridium Perfringens.</p> <p>The site is audited 1/6 months to verify compliance to the Standard and Code. The regulating authority for the site is PrimeSafe.</p> <p>Wastewater treatment External testing of permeate water for chemical and microbiological quality parameters has determined that the permeate has very low levels of chemical impurities and no quantifiable microbiological contaminants.</p> <p>The permeate water storage tank is dosed to achieve a constant free chlorine level of 0.5 – 1.5ppm.</p> <p>Offsite waste disposal Permeate - Excess permeate water will be discharged to the CHW sewer system using enclosed in piping from the site to the CHW WWTP and does not pose a risk to human health.</p> <p>WWTP Sludge/Activated sludge - WWTP sludge/activated sludge is likely to contain microorganisms that may cause risk to human health. To minimise the risk to human health offsite waste disposal is controlled by using a licenced and authorised transport company, ensuring transport bins are leak proof and covered for transport and dispatched for receipt by a licenced treatment provider. The material has a moisture content of approximately 85%, is spadable and therefore does not pose an airborne risk to human health.</p>
<p>* Provide more detail in regard to manufacturing process, i.e., how long is product exposed to 80C in order to assess whether all pathogens, especially spore forming</p>	<p>Animal blood is collected from abattoirs that slaughter healthy animals as fit for human consumption. The blood is then chilled and treated with an anticoagulant. Transported on site where it is processed for commercially produced spray dried protein products (SDPP).</p>

<p>bacteria and resilient viruses are killed</p>	<p>Liquid plasma used in commercial production of SDPP inherently contains antibodies with neutralizing capacity against a variety of pathogens, which contributes to the biosafety of the finished product.</p> <p>The production process involves alkaline pH adjustment of liquid blood followed by spray drying. The alkaline pH environment disrupts cell structure and then is followed by spray drying in a spray dryer using atomisation of a liquid into hot air convection and creating a fine mist into the drying chamber. The combination of alkaline pH and heat treatment is effective in destroying pathogens.</p> <p>The spray-drying process demonstrates its efficacy as a pasteurization-like process to eliminate bacteria and viruses. During spray drying, it is ensured that plasma is exposed to temperatures over 80 °C throughout its substance and this is one of the most important CCP in the manufacturing process of SDPP. The process variables for spray drying includes inlet temperature, outlet temperatures (80°C), small particle size (10 µm), and residence time. The exact residence time of atomised particles is difficult to measure.</p> <p>The effectiveness of heat treatment and other processes is demonstrated annually and whenever process parameters change. Process validation is shown where process samples are taken and tested for Clostridium Perfringens by an approved laboratory. The process is validated by demonstrating that Clostridium perfringens is less than 10cfu/g in ten consecutive samples.</p>
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<p>* If sub-surface irrigation is used, please describe how access is restricted to prevent any pathogen associated risks, including wearing PPE if access is required by staff, signage, etc</p>	<p>Sonac does not irrigate reclaimed water sub-surface.</p>
<p>* Consider pathogen risks (other than Q fever) which may require further control measures to prevent risks posed to human health</p>	<p>Other pathogenic risk is minimised with:</p> <ul style="list-style-type: none">- raw material sourcing (Only animals that have been inspected and approved for slaughter at licenced abattoir operations can be used as raw material)- production processes enclosed (transport, unloading, storage and processing)- high standard of hygienic systems and procedures maintained- restricted access (only authorised persons permitted access to the site)